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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,781	11/26/2003	Russell Alvin Schultz	SIG000103	9074

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EXAMINER	
SONG, JASMINE	
ART UNIT	PAPER NUMBER
2188	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/723,781	SCHULTZ ET AL.	
	Examiner	Art Unit	
	Jasmine Song	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 11-19* is/are rejected.

7)☒ Claim(s) *8-10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-7 and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Everett et al., US 6,220,510 B1, in view of Ulery et al., US 7,036,118 B1.

Regarding claim 1, Everett teaches that a method comprising:

allocating a first portion of a first memory as a static section to store a main program (it is taught as allocating a static segment such as one address space for the program code itself or for the multiple application operation system or any other program instructions or delegate primitive) which uses functional programs (it is taught as the multiple application operating system receives the delegate command and interrupts the execution of the first application and gives control of the integrated circuit

to another application, col.12, lines 42-61 and Fig.7B and 7C) stored in a second memory (second memory is taught as an IC card which stores multiple applications; col.1, lines 21-31 and col.12, lines 33-34); and

allocating a second portion of the first memory as a dynamic section (Fig.1, it is taught as allocating the dynamic segment 107 contains the application's volatile or temporary data) to store other programs (it is taught as temporary data which is used much like conventional computer programs, col.6, lines 8-16).

Everett does not clearly teach that the dynamic section includes a plurality of overlay spaces to overlay the functional programs loaded from the second memory to conserve memory capacity of the first memory.

However, Ulery teaches the dynamic section includes a plurality of overlay spaces to overlay the functional programs loaded from the second memory (Fig.2, PRAM 211(b) and DRAM 21 (b) are allocated by memory allocator 1101 as overlay program objects loaded from object image pool, col.16, lines 12-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Ulery into Everett's system such as the dynamic section includes a plurality of overlay spaces to overlay the functional programs loaded from the second memory because the transfer of these objects between bulk memory and fast memory will allow execution of the application on the target platform (see Ulery, col.2, lines 30-33).

Accordingly, one of ordinary skill in the art would have recognized this and concluded that they are from the same field of endeavor. This would have motivated

one of ordinary skill in the art to implement the above combination for the advantages set forth above.

Regarding claim 2, Everett and Ulery teach that the allocating of the overlay spaces is determined by similar functions performed by the functional programs that are to be loaded into the overlay spaces (col.6, lines 39-42 of Everett).

Regarding claim 3, Everett and Ulery teach that in allocating the overlay spaces, individual overlay spaces have entry and exit points for functional programs loaded into respective overlay spaces (col.5, lines 39-41 and col.8, lines 29-31 of Everett and col.11, lines 18-25 of Ulery).

Regarding claim 4, Everett and Ulery teach that further comprising accessing a functional program from the main program by specifying a resource identifier to identify a particular functional program (col.10, lines 6-20 of Everett and col.11, lines 28 to col.12, lines 9 of Ulery) and an entry address to identify an entry point into one of the overlay spaces (col.5, lines 39-41 and col.8, lines 29-31of Everett and col.11, lines 18-25 of Ulery).

Regarding claim 5, Everett and Ulery teach that the allocating of the first and second portions are allocated on the first memory resident on an integrated circuit (col.3, lines 64 to col.4, lines 6 of Everett) and the functional programs to be loaded into

the overlay spaces are resident on the second memory external to the integrated circuit (col.4, lines 17-20 of Everett).

Regarding claim 6, Everett teaches that a method comprising:

executing a program statement of a main program to perform a particular functional operation by identifying a corresponding functional program (col.10, lines 6-20);

identifying a corresponding functional program to perform the particular functional operation (col.10, lines 6-20);

loading the functional program (col.6, lines 25-48 and col.8, lines 29-31) and executing the functional program (col.6, lines 39-48).

Everett does not clearly teach that identifying a functional program using a resource identifier and loading the functional program into the overlay space specified by the specified entry point. However, Ulery teaches identifying a functional program using a resource identifier and loading the functional program into the overlay space specified by the specified entry point (col.11, lines 18-25 and col.11, lines 35 to col.12, lines 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Ulery into Everett's system such as identifying a functional program using a resource identifier and loading the functional program into the overlay space specified by the specified entry point because the transfer of these objects between bulk memory and fast memory by using specified

entry point will allow execution of the application on the target platform (see Ulery, col.2, lines 30-33).

Accordingly, one of ordinary skill in the art would have recognized this and concluded that they are from the same field of endeavor. This would have motivated one of ordinary skill in the art to implement the above combination for the advantages set forth above.

Regarding claim 7, Everett and Ulery teach that the loading the functional program into the overlay space loads the functional program into a specified overlay space assigned to program functions having similar performing tasks (col.6, lines 39-42 of Everett).

Regarding claims 11 and 15, Everett teaches that an apparatus comprising:

a first memory having a first portion as a static section to store a main program which uses functional programs (it is taught as allocating a static segment such as one address space for the program code itself or for the multiple application operation system or any other program instructions or delegate primitive) and a second portion (Fig.1, it is taught as allocating the dynamic segment 107 contains the application's volatile or temporary data) as a dynamic section to store other programs which reside in the first memory (it is taught as temporary data which is used much like conventional computer programs, col.6, lines 8-16) for a shorter duration than the main program (col.2, lines 46-48); and

a second memory (second memory is taught as an IC card which stores multiple applications; col.1, lines 21-31 and col.12, lines 33-34) operably coupled to store the functional programs.

Everett does not clearly teach that the dynamic section includes a plurality of overlay spaces to overlay the functional programs loaded from the second memory and load the functional program specified by a resource identifier in the main program to a corresponding overlay space specified by an entry point specified by the main program. However, Ulery teaches the dynamic section includes a plurality of overlay spaces to overlay the functional programs loaded from the second memory (Fig.2, PRAM 211(b) and DRAM 21 (b) are allocated by memory allocator 1101 as overlay program objects loaded from object image pool, col.16, lines 12-57) and load the functional program specified by a resource identifier in the main program to a corresponding overlay space specified by an entry point specified by the main program (col.11, lines 18-25 and col.11, lines 35 to col.12, lines 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Ulery into Everett's system such as the dynamic section includes a plurality of overlay spaces to overlay the functional programs loaded from the second memory and load the functional program specified by a resource identifier in the main program to a corresponding overlay space specified by an entry point specified by the main program because the transfer of these objects between bulk memory and fast memory will allow execution of the application on the target platform (see Ulery, col.2, lines 30-33).

Accordingly, one of ordinary skill in the art would have recognized this and concluded that they are from the same field of endeavor. This would have motivated one of ordinary skill in the art to implement the above combination for the advantages set forth above.

Regarding claims 12 and 16, Everett and Ulery teach that the first memory is a random access memory resident in an integrated circuit (it is taught as RAM within AAM of Everett) and the second memory is an external memory to the integrated circuit (it is taught as IC flash card, col.4, lines 53-58 of Everett).

Regarding claims 13 and 17, Everett and Ulery teach that the second memory is larger in capacity than the first memory (col.4, lines 7-17 of Everett), but in which the functional programs are loaded into the overlay spaces to allow overlay in use of the functional programs (col.4, lines 17-20 of Everett).

Regarding claims 14 and 18, Everett and Ulery teach that individual overlay spaces are assigned to load program functions having similar performing tasks (col.6, lines 39-42 of Everett).

Regarding claim 19, Everett and Ulery teach that the integrated circuit includes a register to load resource identifiers, which are then read to load the functional programs (col.6, lines 25-33 of Everett and col.11, lines 28 to col.12, lines 9 of Ulery).

Allowable Subject Matter

4. Claims 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. When responding to the office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections. See 37 C.F.R. 1.111 (c).

6. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasmine Song whose telephone number is 571-272-4213. The examiner can normally be reached on 7:30-5:30 (first Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jasmine Song

Patent Examiner

January 8, 2007